UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,675	09/24/2003	Anna Rosa Coden	YOR920030426US1	7520

29683 7590 03/03/2009

HARRINGTON & SMITH, PC
4 RESEARCH DRIVE, Suite 202
SHELTON, CT 06484-6212

EXAMINER	
JACKSON, JAKIEDA R	

ART UNIT	PAPER NUMBER
2626	

MAIL DATE	DELIVERY MODE
03/03/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/670,675	CODEN ET AL.	
	Examiner	Art Unit	
	JAKIEDA R. JACKSON	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/5/08*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-14,17-26 and 29-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 5-14, 17-26 and 29-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed August 6, 2008, applicant submitted an amendment filed on December 5, 2008, in which the applicant amended the claims and requested reconsideration.

Response to Arguments

2. Applicants have amended the claims to include what was believed to be allowable. In particular, Applicants amended the claims to include the language "wherein a plurality of dictionaries consists of the prefix dictionary, the suffix dictionary and the negative dictionary. Applicant's explained previously that Brecher teaches the claimed dictionaries, however, Brecher uses more than just the claimed dictionaries and therefore, Brecher's invention does not consist of the prefix, suffix and negative dictionary. After further consideration, omission of the extra dictionaries would be obvious if the remaining dictionaries performed the same as before (In re Karlson, 136 USPQ 184): "Omission of element and its function in combination is obvious expedient if remaining elements perform same functions as before." That is, since the extra dictionaries are used for some purpose outside the scope of the claim and the three disclosed dictionaries are used for the same purpose as claimed, then it would be obvious to omit the extra dictionaries plus their functions, since the 3 disclosed dictionaries would still be used for the same purpose as disclosed in the reference. Therefore, the claim limitation has been rejected in view of Brecher.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-2, 5-12, 25-26 and 29-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-2 and 5-12 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[1] and recent Federal Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claims recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. An example is provided below.

A method to process a document (this can be done mentally/physically and does not require it to be tied to another statutory category):

---

[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

partitioning document text separated by spaces into a plurality of tokens based on the spaces (the document can be separated by various paragraphs on a piece of paper, the paragraph spacing representing tokens);

identifying tokens to be ignored and not considered (the longer paragraphs/tokens can be ignored);

determining that a first token considered of the plurality of tokens comprises a chemical name fragment (reviewing the document/paper to see which paragraphs has a chemical name fragment), wherein determining comprises:

examining syntax of the first token (reviewing the tokens for grammatical rules),

examining context of the first token with respect to at least one adjacent token of the plurality of tokens (looking at the tokens for a connection), and

taking into account the syntax and the context, applying to the first token a plurality of regular expressions, rules, and a plurality of dictionaries comprised of a prefix dictionary, and a suffix dictionary to recognize chemical name fragments (mentally forming categories/dictionaries such that the grammar and the context of considered);

combining the first token with at least one of the adjacent tokens that are determined to be a chemical name fragment into a complete chemical name (placing tokens together to have a complete chemical name),

assigning the complete chemical name with one part of speech (reviewing the chemical name to figure out what part of speech is associated with the chemical name); and

storing in a memory the complete chemical name assigned with the one part of speech (mentally storing each name with a part of speech);

where identifying tokens to be ignored (longer paragraphs) comprises applying a negative dictionary to the plurality of tokens (applying the various dictionaries) and wherein the plurality of dictionaries consists of the prefix dictionary, the suffix dictionary, and the negative dictionary (these dictionaries are all used with processing the chemical names).

Claims 25-26 and 29-34 are also non-statutory under the most recent interpretation of the Interim Guidelines regarding 35 U.S.C.101 because although this claim is toward a computer readable medium, as claimed, does not define any structural and functional interrelationship between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized (Warmerdam, 33 F.3d at 1361,31 USPQ2d at 1760; Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035). Examiner notes that as per claims 25-26 and 29-34, elements such as "a computer program product" are necessary structures, the interrelationships between the computer program product and the device are not positively claimed (the present claim scope does not clearly define the relationship between the computer program product and what is performing the operation.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 1-2, 5-14, 17-26 and 29-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brecher (USPN 7,054,754) in view of Shanahan et al. (USPN 6,732,090), hereinafter referenced as Shanahan.

Regarding **claim 1**, Brecher discloses a method to process a document (processing; column 2, lines 1-58), comprising:

partitioning document text separated by spaces into a plurality of tokens based on spaces (transforming a document into lists of tokens that are delimited by spaces; column 42, lines 31-49); and

identifying tokens to be ignored (tokens discarded; column 12, lines 10-33);

determining that a first token considered of the plurality of tokens comprises a chemical name fragment (naphthoxy and phenacyl; column 12, lines 10-33), wherein determining comprises:

examining syntax of the first token (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48), and

taking into account the syntax (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48) and the context (context; column 3, lines 14-60

and column 11, lines 22-42) applying a plurality of regular expressions (regular expression; column 5, lines 41-45), rules (rules; column 2, lines 59-65) and a plurality of dictionaries to recognize chemical name fragments (dictionary; column 6, lines 60-67), comprised of a prefix dictionary (prefix; column 9, line 52 – column 10, line 27) and a suffix dictionary (suffix; column 11, lines 43-59);

combining (concatenate) the first token with at least on the adjacent tokens (adjacent token) that are determined to be a chemical name fragment into a complete chemical name (column 8, lines 29-48);

wherein identifying tokens to be ignored comprises applying a negative dictionary (list of tokens "mg/ml") to the plurality of tokens (column 8, lines 4-61) and wherein the plurality of dictionaries consists of the prefix dictionary (prefix; column 9, line 52 - column 10, line 27), the suffix dictionary (suffix; column 11, lines 43-59), and the negative dictionary (list of tokens; column 8, lines 4-61), but does not specifically teach assigning parts of speech.

Shanahan discloses a method assigning the complete name with one part of speech and storing in a memory the complete chemical name assigned with the one part of speech (part-of-speech; column 10, lines 42-65 with column 53, lines 7-20 and column 57, lines 7-25), to denote the grammatical usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brecher's method wherein it teaches assigning, as taught by Shanahan, to provide an improved document enrichment architecture that allows ubiquitous use of document enrichment services. Such an improved document

enrichment architecture would advantageously provide methods for facilitating the use of such services by automatically attaching, monitoring, and suggesting such services for users (column 2, lines 56-64).

Regarding **claims 2, 14, 26 and 36**, Brecher discloses a method to process a document, but does not specifically teach a method where the complete chemical name is assigned a noun phrase part of speech.

Shanahan discloses a method where the complete chemical name is assigned a noun phrase part of speech (noun phrase; column 10, lines 42-65 with column 42, lines 5-17), to denote the grammatical usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brecher's method where the complete chemical name is assigned a noun phrase part of speech, as taught by Shanahan, to provide an improved document enrichment architecture that allows ubiquity use of document enrichment services. Such improved document enrichment architecture would advantageously provide methods for facilitating the use of such services by automatically attaching, monitoring, and suggesting such services for users (column 2, lines 56-64).

Regarding **claims 5, 17 and 29**, Brecher discloses a method to process a document, but does not specifically teach filtering recognized chemical name fragments using a list of stop words to eliminate erroneous chemical name fragments.

Shanahan discloses a method comprising filtering recognized chemical name fragments using a list of stop words to eliminate erroneous chemical name fragments

(stop words eliminated; column 27, lines 28-36 with column 37, lines 28-45 and column 49, lines 58-65 with column 57, lines 8-25), to discard un-important words.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brecher's method comprising filtering recognized chemical name fragments using a list of stop words to eliminate erroneous chemical name fragments, as taught by Shanahan, to provide an improved document enrichment architecture that allows ubiquity use of document enrichment services. Such an improved document enrichment architecture would advantageously provide methods for facilitating the use of such services by automatically attaching, monitoring, and suggesting such services for users (column 2, lines 56-64).

Regarding **claims 6, 18 and 30**, Brecher discloses a method where chemical name fragments are further recognized by using common chemical word endings (suffix; figures 7c-7g with column 57, lines 8-25).

Regarding **claims 7, 19, and 31**, Brecher discloses a method where application of said regular expressions and rules results in punctuation characters (punctuation characters) being one of maintained or removed between chemical name fragments as a function of context (column 8, lines 4-48 with column 57, lines 8-25).

Regarding **claims 8, 20 and 32**, Brecher discloses a method where said regular expressions comprise a plurality of patterns, individual ones of which are comprised of at least one of characters, numbers and punctuation (punctuation character; column 8, lines 4-48 and column 9, lines 10-51).

Regarding **claims 9 and 21**, Brecher discloses a method where the punctuation comprises at least one of parenthesis (parenthesis), square bracket (square bracket), hyphen, colon and semi-colon (column 8, lines 4-48).

Regarding **claims 10 and 22**, Brecher discloses a method where the characters comprise at least one of upper case C, O, R, N and H (column 4, line 19 – column 5, line 40).

Regarding **claims 11 and 23**, Brecher discloses a method where the characters comprise strings of at least one of lower case xy, ene, ine, yl, ane and oic (figures 7d-7g, lower-case characters; column 3, lines 7-8 with column 6, lines 30-39 and column 7, lines 25-57 and column 11, lines 10-17).

Regarding **claims 12, 24 and 34**, Brecher discloses a method comprising an initial step of tokenizing the document to provide a sequence of tokens (token; column 6, lines 40-67).

Regarding **claim 13**, Brecher discloses a system for processing a text document (text; column 2, lines 59-65) comprising:

a first unit input for partitioning document text separated by spaces into a plurality of tokens based on spaces (transforming a document into lists of tokens that are delimited by spaces; column 42, lines 31-49); and

a second unit, operable for identifying tokens to be ignored (tokens discarded; column 12, lines 10-33);

a third unit, operable for determining that a first token considered of the plurality of tokens comprises a chemical name fragment (naphthoxy and phenacyl; column 12, lines 10-33), wherein determining comprises:

examining syntax of the first token (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48), and

taking into account the syntax (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48) and the context (context; column 3, lines 14-60 and column 11, lines 22-42) applying a plurality of regular expressions (regular expression; column 5, lines 41-45), rules (rules; column 2, lines 59-65) and a plurality of dictionaries to recognize chemical name fragments (dictionary; column 6, lines 60-67), comprised of a prefix dictionary (prefix; column 9, line 52 – column 10, line 27) and a suffix dictionary (suffix; column 11, lines 43-59);

a fourth unit operable to combine (concatenate) the first token with at least on the adjacent tokens (adjacent token) that are determined to be a chemical name fragment into a complete chemical name (column 8, lines 29-48), but does not specifically teach assigning parts of speech.

Shanahan discloses a method assigning the complete name with one part of speech and storing in a memory the complete chemical name assigned with the one part of speech (part-of-speech; column 10, lines 42-65 with column 53, lines 7-20 and column 57, lines 7-25), to denote the grammatical usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brecher's method wherein it teaches assigning,

as taught by Shanahan, to provide an improved document enrichment architecture that allows ubiquitous use of document enrichment services. Such an improved document enrichment architecture would advantageously provide methods for facilitating the use of such services by automatically attaching, monitoring, and suggesting such services for users (column 2, lines 56-64).

Regarding **claim 25**, Brecher discloses a computer program product embodied on a memory and executable to perform operations (computer program is stored on a storage medium; column 12, lines 40-61), comprising:

partitioning document text separated by spaces into a plurality of tokens based on spaces (transforming a document into lists of tokens that are delimited by spaces; column 42, lines 31-49); and

identifying tokens to be ignored (tokens discarded; column 12, lines 10-33);

determining that a first token considered of the plurality of tokens comprises a chemical name fragment (naphthoxy and phenacyl; column 12, lines 10-33), wherein determining comprises:

examining syntax of the first token (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48), and

taking into account the syntax (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48) and the context (context; column 3, lines 14-60 and column 11, lines 22-42) applying a plurality of regular expressions (regular expression; column 5, lines 41-45), rules (rules; column 2, lines 59-65) and a plurality of dictionaries to recognize chemical name fragments (dictionary; column 6, lines 60-67),

comprised of a prefix dictionary (prefix; column 9, line 52 – column 10, line 27) and a suffix dictionary (suffix; column 11, lines 43-59);

combining (concatenate) the first token with at least on the adjacent tokens (adjacent token) that are determined to be a chemical name fragment into a complete chemical name (column 8, lines 29-48), but does not specifically teach assigning parts of speech.

Shanahan discloses a method assigning the complete name with one part of speech and storing in a memory the complete chemical name assigned with the one part of speech (part-of-speech; column 10, lines 42-65 with column 53, lines 7-20 and column 57, lines 7-25), to denote the grammatical usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brecher's method wherein it teaches assigning, as taught by Shanahan, to provide an improved document enrichment architecture that allows ubiquitous use of document enrichment services. Such an improved document enrichment architecture would advantageously provide methods for facilitating the use of such services by automatically attaching, monitoring, and suggesting such services for users (column 2, lines 56-64).

Regarding **claim 33**, it is interpreted and rejected for same reasons as set forth in the combination of claims 9-11.

Regarding **claim 35**, Brecher discloses a system comprising a plurality of computers at least two of which are coupled together through a data communications network (one or more programmable computers; column 12, lines 40-54) comprising:

a first unit input for partitioning document text separated by spaces into a plurality of tokens based on spaces (transforming a document into lists of tokens that are delimited by spaces; column 42, lines 31-49); and

a second unit, operable for identifying tokens to be ignored (tokens discarded; column 12, lines 10-33);

a third unit, operable for determining that a first token considered of the plurality of tokens comprises a chemical name fragment (naphthoxy and phenacyl; column 12, lines 10-33), wherein determining comprises:

examining syntax of the first token (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48), and

taking into account the syntax (scanning for syntactic significance; column 3, lines 40-60 and column 8, lines 4-48) and the context (context; column 3, lines 14-60 and column 11, lines 22-42) applying a plurality of regular expressions (regular expression; column 5, lines 41-45), rules (rules; column 2, lines 59-65) and a plurality of dictionaries to recognize chemical name fragments (dictionary; column 6, lines 60-67), comprised of a prefix dictionary (prefix; column 9, line 52 – column 10, line 27) and a suffix dictionary (suffix; column 11, lines 43-59);

a fourth unit operable to combine (concatenate) the first token with at least on the adjacent tokens (adjacent token) that are determined to be a chemical name fragment into a complete chemical name (column 8, lines 29-48), but does not specifically teach assigning parts of speech.

Shanahan discloses a method assigning the complete name with one part of speech and storing in a memory the complete chemical name assigned with the one part of speech (part-of-speech; column 10, lines 42-65 with column 53, lines 7-20 and column 57, lines 7-25), to denote the grammatical usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Brecher's method wherein it teaches assigning, as taught by Shanahan, to provide an improved document enrichment architecture that allows ubiquitous use of document enrichment services. Such an improved document enrichment architecture would advantageously provide methods for facilitating the use of such services by automatically attaching, monitoring, and suggesting such services for users (column 2, lines 56-64).

Regarding **claim 37**, Brecher discloses a system where a user of the system accesses the system through a data communications network (column 12, lines 55-61).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAKIEDA R. JACKSON whose telephone number is (571)272-7619. The examiner can normally be reached on Monday-Friday from 5:30am-2:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jakieda R Jackson/
Examiner, Art Unit 2626
February 18, 2009

/David R Hudspeth/
Supervisory Patent Examiner, Art Unit 2626